UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,361	08/17/2001	Gerard Chauvel	TI-31362	4872

23494	7590	01/25/2005

TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER
HASHEM, LISA

ART UNIT	PAPER NUMBER
2645	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	09/932,361	CHAUVEL ET AL.
	Examiner	**Art Unit**
	Lisa Hashem	2645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _16 September 2004_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-15_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-15_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.   Claims 1 and 5 recite the limitation "the execution". There is insufficient antecedent

basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1-14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S.

Patent No. 5,828,568 by Sunakawa et al, hereinafter Sunakawa.

Regarding claim 1, Sunakawa discloses a method for controlling an execution of multiple

tasks in a processing circuit including several modules (see Abstract; column 1, lines 42-60;

column 5, line 65 – column 6, line 3; see Figure 2), comprising the steps of: determining

temperature-associated information at various areas of the processing circuit (column 2, lines 16-

26); in response to temperature-associated information indicating an excessive temperature at an

area associated with a first of said processing modules, modifying parameters for executing tasks

on one or more adjacent processing modules in order to reduce heat generated by the adjacent

processing modules and contributing to the excessive temperature at the first processing module

(column 8, lines 42-54; column 11, line 46 – column 12, line 24).

Regarding claim 2, the method of claim 1 mentioned above, wherein Sunakawa further

discloses said determining step comprises the step of monitoring operations executed by said

modules (column 11, line 46 – column 12, line 24).

Regarding claim 3, the method of claim 1 mentioned above, wherein Sunakawa further

discloses said determining step inherently comprises the step of calculating power dissipation

information at various locations in said processing circuit (column 9, line 54 – column 10, line 2;

column 13, lines 39-47), wherein it is possible to calculate the power dissipation from measured

and probabilistic power consumption (as noted in the Specification of the instant application

'09/932361': page 11, lines 16-21).

Regarding claim 4, the method of claim 1 mentioned above, wherein Sunakawa

further discloses said determining step comprises the step of calculating a current temperature at

various locations in said processing circuit (column 8, lines 42-54).

Regarding claim 5, Sunakawa discloses a method for controlling an execution of

multiple tasks in a processing circuit including a plurality of processing modules (see Abstract;

column 1, lines 42-60; column 5, line 65 – column 6, line 3; see Figure 2), comprising the steps

of: generating a task allocation scenario for allocating multiple tasks among the plurality of

processing modules; prior to executing the tasks, estimating temperature-associated information

for various locations in the processing circuit according to the scenario (column 2, lines 16-26);

determining whether a temperature threshold would be exceeded by executing the tasks

according to the scenario (column 8, lines 42-54; column 11, line 46 – column 12, line 24).

Regarding claim 6, the method of claim 5 mentioned above, wherein Sunakawa

further discloses said step of generating a task allocation scenario inherently comprises the step

of receiving a task list describing the tasks to be executed and a task model describing the tasks

(column 9, line 54 – column 10, line 2).

Regarding claim 7, the method of claim 6 mentioned above, wherein Sunakawa

further discloses the task model inherently includes initial area-specific power dissipation

estimates for each task (column 9, line 54 – column 10, line 2; column 13, lines 39-47), wherein

it is possible to calculate the power dissipation from measured and probabilistic power

consumption (as noted in the Specification of the instant application '09/932361': page 11, lines

16-21).

Regarding claim 8, Sunakawa discloses a processing circuit (see Figure 2) including a

plurality of processing modules for executing multiple tasks (see Abstract; column 1, lines 42-

60; column 5, line 65 – column 6, line 3) comprising: circuitry for determining temperature-

associated information at various areas of the processing circuit (column 2, lines 16-26); and

circuitry responsive to temperature-associated information indicating an excessive temperature at

an area associated with a first of said processing modules for modifying parameters for executing

tasks on one or more adjacent processing modules in order to reduce heat generated by the

adjacent processing modules and contributing to the excessive temperature at the first processing

module (column 9, line 54 – column 10, line 2; column 11, lines 46-57).

Regarding claim 9, the processing circuit of claim 8, wherein Sunakawa further discloses

said determining circuitry comprises circuitry for monitoring operations executed by said

processing modules (column 11, line 46 – column 12, line 24).

Regarding claim 10, the processing circuit of claim 8, wherein Sunakawa further

discloses said determining circuitry comprises circuitry for inherently calculating power

dissipation information at various locations in said processing circuit (column 9, line 54 –

column 10, line 2; column 13, lines 39-47), wherein it is possible to calculate the power

dissipation from measured and probabilistic power consumption (as noted in the Specification of

the instant application '09/932361': page 11, lines 16-21).

Regarding claim 11, the processing circuit of claim 8 mentioned above, wherein

Sunakawa further discloses said determining circuitry comprises circuitry for calculating a

current temperature at various locations in said processing circuit (column 8, lines 42-54).

Regarding claim 12, Sunakawa discloses a processing circuit (see Figure 2) comprising: a

plurality of processing modules for executing multiple tasks (see Abstract; column 1, lines 42-

60; column 5, line 65 – column 6, line 3); and circuitry for generating a task allocation scenario

for allocating the tasks among the processors, estimating temperature-associated information for

various locations in the processing circuit and determining whether a temperature threshold

would be exceeded if the tasks were to be executed according to the scenario (column 2, lines

16-26; column 9, line 54 – column 10, line 2; column 11, lines 46-57).

Regarding claim 13, the processing circuit of claim 12, wherein Sunakawa further

discloses said circuitry for generating a task allocation scenario comprises circuitry for receiving

a task list describing the tasks to be executed and a task model describing the tasks (column 9,

line 54 – column 10, line 2).

Regarding claim 14, the processing circuit of claim 13, wherein Sunakawa further

discloses the task model inherently includes initial area-specific power dissipation estimates for

each task (column 9, line 54 – column 10, line 2; column 13, lines 39-47), wherein it is possible

to calculate the power dissipation from measured and probabilistic power consumption (as noted

in the Specification of the instant application '09/932361': page 11, lines 16-21).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No.

6,718,164 by Korneluk et al, hereinafter Korneluk in view of Sunakawa.

Regarding claim 15, Korneluk discloses a mobile communications device (see Abstract;

Figure 7) comprising: a plurality of processing modules for executing a plurality of tasks

(column 9, lines 43-48; column 10, lines 23-27); an antenna for receiving and transmitting

signals; and receiver/transmitter circuitry coupled to said antenna for sending and receiving

audio and data signals (column 9, line 66 – column 10, line 13), said receiver/transmitter

circuitry including a processing circuit comprising: circuitry for determining temperature-

associated information at various areas of the processing circuit (column 10, lines 13-30); and

circuitry for executing tasks or data communication on a plurality of processing modules

responsive to said temperature-associated information to prevent problems associated with one

or more areas exceeding a temperature threshold (column 9, lines 16-36; column 10, line 44 –

column 11, line 65).

Korneluk does not disclose circuitry for modifying parameters for executing tasks on one

or more adjacent processing modules.

Sunakawa discloses a processing circuit (see Figure 2) including a

plurality of processing modules for executing multiple tasks (see Abstract; column 1, lines 42-

60; column 5, line 65 – column 6, line 3) comprising: circuitry for determining temperature-

associated information at various areas of the processing circuit (column 2, lines 16-26); and

circuitry responsive to temperature-associated information indicating an excessive temperature at

an area associated with a first of said processing modules for modifying parameters for executing

tasks on one or more adjacent processing modules in order to reduce heat generated by the

adjacent processing modules and contributing to the excessive temperature at the first processing

module (column 9, line 54 – column 10, line 2; column 11, lines 46-57).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify the mobile communication device of Korneluk to include circuitry for

modifying parameters for executing tasks on one or more adjacent processing modules as taught

by Sunakawa. One of ordinary skill in the art would have been lead to make such a modification

since a mobile communication device can include circuitry to control executing tasks on a

plurality of processing modules in order to reduce the amount of heat generated.

Response to Arguments

7.   Applicant's arguments with respect to claims 1-15, filed on September 16, 2004, have

been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

9.   A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

10.   Any response to this action should be mailed to:

> Commissioner of Patents and Trademarks
> Washington, D.C. 20231

Or faxed to:

> (703) 872-9314 (for formal communications intended for entry)

Or call:

> (703) 306-0377 (for customer service assistance)

Hand-delivered responses should be brought to: Crystal Park II, 2121 Crystal Drive, Arlington,
VA, Sixth Floor (Receptionist).

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lisa Hashem whose telephone number is (703) 305-4302. The

examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Fan Tsang can be reached on (703) 305-4895. Any inquiry of a general nature or

relating to the status of this application or proceeding should be directed to the Group

receptionist whose telephone number is (703) 305-3900.

lh
January 21, 2005

FAN TSANG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600